

LOFMARK  
Serial No. 09/768,217

Atty Dkt: 2739-4  
Art Unit: 2644

### REMARKS/ARGUMENTS

Reconsideration of the captioned application is respectfully requested.

Claims 1, 3, 8-11, 13-17, 19-26, 28, 31, 32 and 34-39 stand finally rejected under 35 USC 102(b) as being anticipated by *The Radio Amateur's Handbook*. All prior art rejections are respectfully traversed for at least the following reasons.

In chapter 2 of *The Radio Amateur's Handbook*, only pages 48+ directly pertain to filters. Moreover, the filters discussed in chapter 2 are only those which have purely resistive impedance (not complex impedance). There is no teaching or suggestion of a filter having complex characteristic impedance.

The office action alleges that all claim limitations are exhibited in Figs. 2-53. Figs. 2-53 comprise one whole page with eighteen (18) different filter designs. Yet not a single one of said filter designs in Figs. 2-53 involves a resistance or a resistive element.

The Office Action apparently alleges that a resistance or resistive element is taught by the resistive element R illustrated in Figs. 2-53. Yet, as previously explained, the resistive element R that is present in five of the drawings of Figs. 2-53 is clearly indicated with dashed lines and connected to the output of said five filters. Thus, the resistive element R of Figs. 2-53 that is referenced in the text of pages 41-50 is clearly the load resistance. The load resistance is not part of the filter, and is described and shown only for enabling calculation of the exact values of the capacitive element(s) C and inductive element(s) L of all the eighteen exhibited filter designs. Moreover, the load resistance is supplied by the network to which the filter is connected, and therefore it is not possible to chose or select the value of the load resistance when designing the filter.

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Reference by the office action to the Quality factor Q (e.g., on page 43 of *The Radio Amateur's Handbook*) is in context of discussion of a general series resonant circuit, not particularly to a filter. Note, for example, that Figs. 2-41 and 2-42 relate to resonant circuits (not to filters per se) for illustrating special characteristics of Q.

But even if it were assumed *arguendo* that the *Handbook's* discussion of resonant circuits were to apply to filters, the *Handbook* teaches away from Applicant's claimed invention. *The Handbook* admits that most diagrams of resonant circuits show only inductance and capacitance, and no resistance. And though resistance may be present (e.g., due to wire of the coil, not as a separate resistive element), *The Radio Amateur's Handbook* seeks to reduce the inherent resistance to the lowest possible value. *See*, in this regard, the two paragraphs above the equation for Q on page 42 for *The Handbook's* definition of the Quality factor Q (see page 42, left column, in the Section with the subtitle "Q"). To put the subject matter in correct context, this section states that "the object of design is to reduce the inherent resistance to the lowest possible value". In the preceding sentence, it is stated that "this energy loss is equivalent to resistance".

So, with *The Handbook* seeking to reduce the inherent resistance (of a resonant circuit, not even a filter) to the lowest possible value, it is preposterous to postulate that *The Handbook* would teach or suggest choosing filter components so that the resistance assists in giving the characteristic impedance of the filter a complex character, particularly since chapter 2 of *The Handbook* is confined to resistive impedance rather than complex impedance.

With the elucidation provided above and other considerations, the Examiner has every reason to withdraw all rejections and pass the application to issue. All claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.

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The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,  
NIXON & VANDERHYE P.C.

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